

Daily GLOWBUGS

Digest: V1 #104

via AB4EL Web Digests @ SunSITE

Purpose: building and operating vacuum tube-based QRP rigs

[AB4EL Ham Radio Homepage @ SunSITE](#)

%%%% GlowBugs %%%%% GlowBugs %%%%% GlowBugs %%%%% GlowBugs %%%%%

Subject: glowbugs V1 #104

glowbugs

Thursday, September 4 1997

Volume 01 : Number 104

Date: Wed, 3 Sep 1997 21:18:42 -0400 (EDT)

From: kim herron <kherron@voyager.net>

Subject: Apache' surfaces after decades being lost.

Hi Gang,

As usual, nothing stays the same. My houseguest has found other lodgings and so my wife and I have found ourselves alone again (YAAAAAAA!!!).

Today I returned a Drake L4B and power supply to its owner and got in return a rather neat surprise (and prize). I am now the proud owner of a Heath Apache'. It was still in its original BOX!! Unbuilt!! Now the mice have done me the favor of removing the kit from its carton, but it appears to be all there. The transformers are still in their own box. Unfortunately, the cabinet was apparently lost in shipment. That was how Leonard, W8SPX, ended up with it in the first place. He bought it at an unclaimed freight outlet here in Grand Rapids, MI back in 1960!! It has been hiding in his garage ever since. No doubt the cabinet got separated from the shipment and the shipper wrote it off. Who knows. Anyway, I now have this quandry: Do I build it, make parts out of it, or pass it on to some other deserving soul with more time than me?? Any input would be appreciated. Thanks for the input.

Kim Herron

kherron@voyager.net or kherron@vixa.voyager.net

Date: Thu, 4 Sep 1997 08:54:07 -0700 (MST)

From: Jeff Duntemann <jeffd@coriolis.com>

Subject: Re: Apache' surfaces after decades being lost.

At 09:18 PM 9/3/97 -0400, kim herron wrote:

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>some other deserving soul with more time than me?? Any input would be
>appreciated. Thanks for the input..

Find a parts unit with an intact cabinet and BUILD it! You won't get a chance like that again!

- --73--

- --Jeff Duntemann KG7JF
Scottsdale, Arizona

Date: Thu, 4 Sep 1997 12:04:18 -0700 (MST)
From: Jeff Duntemann <jeffd@coriolis.com>
Subject: Space Charge Tubes III

Hi gang--

While looking for 6M converter circuits for KA1YRV last night I stumbled across no fewer than three space charge tube circuits that I had previously overlooked. So if you're keeping tabs on 12V plate supply tubes, here are three more design examples for you.

"Something New in High-Frequency Mobile Converters" QSY, September 1956, p 16. A 12AF6 RF amp is followed by a 12AG6 capacitor-tuned converter, followed by another LC-tuned 12AG6 converter. I don't know why they did it this way; it seems awkward to me. The physical layout is very tight, with plug-in tuned circuits (including caps) under shield cans. This article seems of value largely for providing a good design example of an LC-tuned converter stage. It's a long piece with a lot of useful side comments on space-charge tubes, which were very novel at that time.

"Mobile Converter, No B+" QST August 1958, p 16. One-band 75m coverage through the car radio is the goal, by way of a 12AF6 RF amp (I think a 12EK6 will work as well) and a 12AD6 pentagrid converter. Converter uses slug-tuned LC frequency control, so my guess is this circuit wouldn't be stable enough for low-drift copy of SSB or CW. Extremely simple, tho, and you could throw it together in an evening. Could be fun to build something like this to pull in SWBC to a kitchen radio.

"A Crystal-Controlled Converter with Bandswitching" QST, March 1962, p 11. 5-band HF converter using a 12EK6 RF amp and a 12AD6 pentagrid converter. Needs a separate crystal for each of the 5 bands. Big plus is no unobtainium, and they actually give you the inductance values of the various bandswitched coils, allowing us to re-create them in the absence of those fine old ceramic slug-tuned forms that QST obsessed on for so many years. I may in fact use this design as the front end in my (hopeful) space charge superhet.

If I spot any more I'll report further here.

- --73--

- --Jeff Duntemann KG7JF
Scottsdale, Arizona

Date: Thu, 4 Sep 1997 16:26:04 -0700
From: "Frank A. West" <ke6vhm@earthlink.net>
Subject: Re: Apache' surfaces after decades being lost.

Boy I couldn't agree with Jeff more. Build it !!!! Sounds like the deal of the decade. There are more than one out here that would give the left one for that chance.

TTFN 73 Frank KE6VHM
Grid Square DM13
CW Forever

- -----
> From: Jeff Duntemann <jeffd@coriolis.com>
> To: kim herron <kherron@voyager.net>
> Cc: glowbugs@www.atl.org
> Subject: Re: Apache' surfaces after decades being lost.
> Date: Thursday, September 04, 1997 8:54 AM
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> Scottsdale, Arizona
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Date: Fri, 5 Sep 1997 01:33:32 +0000
From: Sandy W5TVW <ebjr@worldnet.att.net>
Subject: RE: Regenny receivers..notes

Hello Gang,

This goes under teaching an old dog some "old" tricks. I hope it might help you "new dogs" out there!

Been experimenting with various dual triodes in a detector-a.f. amplifier regenerative receiver configuration. Using old style 2000 ohm headset as the 'reproducers'. Have played with various values of grid leaks, regeneration controls (throttle capacitors vs. plate rheostat for regen stage), etc.

Most of my experimentation has been with 'battery' tubes such as the '19, 1J6G, pair of '30's, pair of 1G4G's, etc. Tonight I wired an adapter to use a single 3A5 in place of the 1J6G. Since this is a 1.4 volt filament tube (or 2.8v series operation, mine wired for 1.4 volts), I use a limiting resistor in the "A"

supply which is 2 volts from Gates lead-acid cells in my battery box. The 3A5 works very well, but will require adjustment to the 'tickler' coil or the bypass cap.

at the B+ end of the tickler for a bit less feedback for ideal operation. Obviously, it has more gain than the 1J6 (octal version of the '19).

What was startling was how the 1J6 operated with the reduced filament voltage. I raided my junkbox for a 6 or 10 ohm pot., put it in line and found the

1J6 actually works better with 1.5-1.6 volts on the filament instead of 2 volts! It will regenerate well down to a little less than a volt. On reading all the old

books, I presumed that the filament rheostats in the old receivers were mainly there to reduce a 3 volt dry-cell supply to the 2 volts the 1J6 was rated for. Right? Well, partially! I read tales of 01A's etc. working at well less than the 5 volts they are rated for and passed it off as non uniformity in the old early tubes. NOT!!!!

Moral: If you build a regen using 'battery' bottles, don't leave out the filament control! Even if you think you have the 'rated "A" supply voltage' for the tubes in question! As any of you know who have messed with regenerative receivers, making one work properly can be a tedious process. Even though they are very simple, they can and will be very cantankerous! Nothing marvels to the performance they give with an absolutely bare minimum of parts! Major Edwin Armstrong was a genius!

73,

E. V. Sandy Blaize, W5TVW

"Boat Anchors collected, restored, repaired, traded and used!"

417 Ridgewood Drive,

Metairie, LA., 70001

ebjr@worldnet.att.net

Looking for: Hallicrafters SR-75 Transceiver

RK-34(VT-224) tubes, Butternut HF2V antenna

End of glowbugs V1 #104

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Created by **Steve Modena, AB4EL**

Comments and suggestions to **modena@SunSITE.unc.edu**
